

In The Claims:

Please amend the claims as follows:

1. (original) A vertical routing structure for a multi-layered substrate with a lamination structure, wherein the lamination structure has at least a through-hole linking the two surfaces of the lamination structure, the vertical routing structure comprising:

a conductive rod positioned inside the through-hole and both ends of the conductive rod protruding above the two surfaces of the lamination structure respectively; and

a conductive layer formed between the interior sidewall of the through-hole and the conductive rod.

2. (original) The vertical routing structure of claim 1, wherein the multi-layered substrate furthermore comprises a first mask layer having at least a first opening on one surface of the lamination structure and a second mask layer having at least a second opening on another surface of the lamination structure such that the ends of the conductive rod not only fill up the first opening and the second opening but also protrude beyond the surfaces of the first mask layer and the second mask layer respectively.

3. (original) The vertical routing structure of claim 2, wherein the second opening has a diameter greater than the through-hole.

4. (original) The vertical routing structure of claim 1, wherein one end of the conductive rods serves as a bump, a pre-solder block or a contact.

5. (original) The vertical routing structure of claim 1, wherein the structure furthermore comprises a bump attached to one end of the conductive rod.

6. (original) The vertical routing structure of claim 1, wherein the structure furthermore comprises a pre-solder block attached to one end of the conductive rod.

7. (original) The vertical routing structure of claim 1, wherein the structure furthermore comprises a solder ball attached to one end of the conductive rod.

8. (original) The vertical routing structure of claim 1, wherein the lamination structure furthermore comprises at least a buried circuit layer that connects electrically with the conductive layer.

Claims 9-16 (canceled)

17. (original) A multi-layered substrate, at least comprising:

a lamination structure having at least a through-hole, wherein the through-hole passes through and links up with the surfaces of the lamination structure;

a first mask layer formed on one surface of the lamination structure, wherein the first mask layer has at least a first opening;

a second mask layer formed on another surface of the lamination structure, wherein the second mask layer has at least a second opening; and

a vertical routing structure comprising a conductive rod and a conductive layer, wherein the conductive rod occupies the interior of the through-hole and the ends of the conductive rod completely fill the first opening and the second opening respectively, and the conductive layer occupies the space between the interior surface of the through-hole and the conductive rod.

18. (original) The multi-layered substrate of claim 17, wherein the second opening has a diameter greater than the through-hole.

19. (original) The multi-layered substrate of claim 17, wherein the conductive layer further extends into the peripheral surface of the second opening of the second mask layer.

20. (original) The multi-layered substrate of claim 17, wherein one end of the conductive rod serves as a bump, a pre-solder block or a contact.

21. (original) The multi-layered substrate of claim 17, wherein the substrate furthermore comprises a bump attached to one end of the conductive rod.

22. (original) The multi-layered substrate of claim 17, wherein the substrate furthermore comprises a pre-solder block attached to one end of the conductive rod.

23. (original) The multi-layered substrate of claim 17, wherein the substrate furthermore comprises a solder ball attached to one end of the conductive rod.

24. (original) The multi-layered substrate of claim 17, wherein the lamination structure furthermore comprises at least a buried circuit layer that connects electrically with the conductive layer.

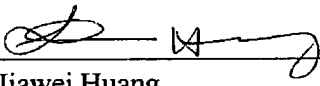
No new matter has been added to the application by the amendments made to the claims.

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Respectfully submitted,
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